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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,956	11/24/2003	David Alan College	18091US	9405
7590	04/26/2005		EXAMINER	
			LANGDON, EVAN H	
			ART UNIT	PAPER NUMBER
			3654	

DATE MAILED: 04/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/723,956	COLLEGE, DAVID ALAN	
	<b>Examiner</b>	<b>Art Unit</b>	
	Evan H Langdon	3654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 15-18 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-14 is/are rejected.
- 7) Claim(s) 1,10 and 11 is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/24/03</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Election/Restrictions*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-14, drawn to a tape for advancing a component carrying tape, classified in class 226, subclass 32.
- II. Claims 1, 15-18, drawn to a pull-off wheel for removing a cover tape, classified in class 242, subclass 419.5.

Claim 1 link(s) inventions I and II. The restriction requirement between the linked inventions is subject to the nonallowance of the linking claim(s), claim 1. Upon the allowance of the linking claim(s), the restriction requirement as to the linked inventions shall be withdrawn and any claim(s) depending from or otherwise including all the limitations of the allowable linking claim(s) will be entitled to examination in the instant application. Applicant(s) are advised that if any such claim(s) depending from or including all the limitations of the allowable linking claim(s) is/are presented in a continuation or divisional application, the claims of the continuation or divisional application may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Where a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

The inventions are distinct, each from the other because of the following reasons:

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Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention the pull-off wheel for removing a cover tape has separate utility such as a take-up reel when transferring film of a film substrate. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Salvatore Anastasi on 30 March 2005 a provisional election was made with traverse to prosecute the invention of I, claims 1-14. Affirmation of this election must be made by applicant in replying to this Office action. Claims 15-18 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Objections***

Claims 1, 10 and 11 are objected to because of the following informalities: the claim limitation "disk" should be change to ---disc---. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "the worm gear" in line 3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Boss et al. (US 5,024,720).

Boss et al discloses a tape feeder for advancing a component-carrying tape to present sequential electronic components disposed in the tape at a pitch for assembly, the tape feeder comprising:

a feed sprocket 40 and an encoder disc 50 operatively associated with each other and rotatably disposed on a common axis;

a motor 32 operatively connected to the feed sprocket 40 to repetitively rotate the feed sprocket over an angle corresponding to the pitch of the component-carrying tape; and  
an encoder 52 disposed to read the encoder disk and provide a feedback signal indicating the angular position of the feed sprocket.

In regards to claims 2-3, Boss discloses comprising a worm gear 42, 44 operatively associated with the feed sprocket 40 and encoder disc 50 and rotatably disposed on their common axis to impart angular velocity of the worm gear to the feed sprocket and the encoder disc, the worm shaft 36 coupled to the motor 32 and engaged with the worm gear 42.

In regards to claims 4 and 5, Boss discloses the feed sprocket 40, the encoder disc 50 and the worm gear are attached around a central hub.

In regards to claims 6-9, Boss discloses an upper feed track 22 and a housing 12, where the upper feed track 22 and the motor 32, feed sprocket 40, encoder 20 and a window are mounted in the housing, the window is positioned approximate the engagement of the feed sprocket 40 and the component-carrying tape.

In regards to claim 10, the encoder disk has two rings of lines one ring 46 having a line spacing corresponding to the pitch of the component-carrying tape, and the other ring 50 having a line spacing less than the pitch of the component-carrying tape (col. 5, lines 42-59).

In regards to claim 11, Boss discloses the encoder disc has a ring of about the feed sprocket has a number of teeth 48 and the encoder disk has a ring of discrete lines 50 at essentially uniform angular spacing, the lines being of a substantially greater number than the number of teeth 48 on the feed sprocket (col. 5, lines 42-59).

In regards to claims 13 and 14, Boss discloses the rotation on the worm bear is defined by ball bearings

Claims 1, 6-9 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Liebeke (WO 02/080643 A1).

Liebeke discloses a tape feeder for advancing a component-carrying tape to present sequential electronic components disposed in the tape at a pitch for assembly, the tape feeder comprising:

a feed sprocket 7 and an encoder disc 13 operatively associated with each other and rotatably disposed on a common axis;

a motor 16 operatively connected to the feed sprocket 7 to repetitively rotate the feed sprocket over an angle corresponding to the pitch of the component-carrying tape; and

an encoder 14 disposed to read the encoder disk and provide a feedback signal indicating the angular position of the feed sprocket.

In regards to claims 6-9, Liebeke discloses an upper feed track, Fig. 2, and a housing 5, where the upper feed track and the motor 16, feed sprocket 7, encoder 14 and a window 12 are mounted in the housing, the window 12 is positioned approximate the engagement of the feed sprocket 7 and the component-carrying tape 1.

In regards to claim 11, Liebeke discloses the encoder disc has a ring of about the feed sprocket has a number of teeth and the encoder disk has a ring of discrete lines 13 at essentially uniform angular spacing, the lines being of a substantially greater number than the number of teeth 8 on the feed sprocket.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liebeke.

With respect to claim 12, Liebeke does not disclose specific values for the number of lines about the encoder disc. However, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been obvious through routine experimentation and optimization, for one of ordinary skill in the art to use about 2500 lines to more accurately move the sprocket wheel in very fine increments.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Evan H Langdon whose telephone number is (571)272-6948. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy Matecki can be reached on (571) 272-6951. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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